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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,164	02/22/2002	Charles Abraham	GLBL/020	8383

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EXAMINER

ISSING, GREGORY C

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,164

Applicant(s)

ABRAHAM ET AL.

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification is devoid of the terminology "terrestrial link." There is nothing in the specification that would lead one skilled in the art to believe that only a terrestrial communication link could provide the desired function or that the use of a terrestrial link provided any novel or unobvious benefit. The scope of "terrestrial link" is not ascertainable from the disclosed description.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 and 29-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al in view of Taylor et al.

King et al teach the system substantially as claimed including a base station (Figure 5) having means for receiving satellite tracking data directly from the satellites (502/504) or alternatively from a remote location (col. 6, lines 48-51), a processor 506 (also shown in Figure

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7) for formatting the satellite tracking data into a format supported by a remote receiver 304, and a transmitter (508/510) for transmitting the formatted data representative of the satellite trajectories using a terrestrial or satellite communication link.

King et al differ from claim 1, specifically, due to the failure to specify receiving satellite tracking data *“from a satellite control station.”* Instead, King et al show the base station receiving the satellite tracking data directly from the satellites using a GPS receiver or alternatively, the information could be received remotely and transmitted to the base station.

King et al also differ from the claimed subject matter of claim 1, specifically, since the time validity of *“valid for at least four hours”* is not specifically described. However, King et al define the trajectory data as generally any continuously varying function of time modeled with an infinite order polynomial. As the modeled information is contemplated as an infinite order polynomial as a function of time, there is nothing that would invalidate the curve data from being used at a later time, including at least four hours.

Taylor et al describe a navigation system including a Master Control Station 18 that provides satellite tracking data to a Remote Control Station 12 via a terrestrial communication link which station additionally provides the tracking data to remote users via terrestrial or satellite communication links. The satellite tracking data provided to the remote aiding station include ephemeris and upload data which upload data includes almanac data, ALMORB, which is known to be valid for at least four hours. Thus, Taylor et al provide the teachings of (1) the use of a satellite tracking station to directly provide satellite tracking data in the form of ephemeris and almanac information to a base station (MCS 18 → RCS 12), (2) the communication link between the satellite control station and the base station being a land line or

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other means, (3) the use of the base station to process the data into a format to be used by a mobile user to eliminate the need for dynamic computations in the mobile receiver, and (4) the transmission of the formatted data from the base station to the mobile user is via a terrestrial or satellite communication link. The validity of almanac data is known to exceed four hours.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify King et al by providing the remotely received satellite tracking data information to the base station 302 from a satellite tracking station in view of the teachings of Taylor et al who specifically describe an RCS receiving such information from an MSC and thereby reduce the latency of the satellite tracking data as well as reduce the time required for mobile users to compute satellite position. The satellite tracking data from the satellite tracking station includes ephemeris and almanac data; the validity of the almanac data is known to be valid for up to 180 days. Additionally, as noted above, the satellite curve fit data provided between the base station and the mobile user is not limited to a specific time duration. The dependent claims are shown and/or are obvious design considerations in the aiding of satellite navigation receivers.

The applicants argue that the combination fails to teach, suggest, or render obvious the claimed invention since the combination fails to teach or suggest receiving satellite tracking data from a satellite control station and transmitting formatted satellite tracking data that is valid for a period of at least four hours to a remote receiver using a terrestrial communication link. More specifically, applicants argue that King et al do not teach receiving satellite tracking data from a satellite control station since King et al allegedly only suggest receiving the data from the satellites either directly or remotely. Secondly, applicants argue that Taylor et al do not suggest

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transmitting formatted data that is valid for at least four hours using a terrestrial communication link. Lastly, there is allegedly no reason to combine the references since Taylor et al allegedly “teaches away from” transmitting data that is valid for at least four hours using a terrestrial link and King et al allegedly “teaches away from” receiving the data from a satellite control station.

The applicants’ arguments are not persuasive. The applicants argue that all of the elements are not taught by the combination. As set forth above, it is believed that all of the elements are taught by the combination, including providing satellite tracking data from a satellite control station to an aiding station wherein the satellite tracking data is valid for at least four hours. King et al disclose communicating the curve fit data over both a terrestrial or satellite communication link. Additionally, Taylor et al teach the use of providing the formatted data via a tower or satellite relay, i.e. terrestrial or satellite communication link. Thus, the applicants’ argument that the claims are distinguishable due to the use of a terrestrial communication link is not convincing. Furthermore, the specification is devoid of any citation of a “terrestrial link”. The prior art teaches the use of a satellite tracking station (MCS of Taylor et al) as a source of satellite trajectory data. Additionally, the data received at the aiding station of Taylor et al which is received directly from a satellite tracking station includes almanac data the validity of which is known to exceed four hours. The applicants’ argument that Taylor et al do not teach transmitting formatted data that is valid for at least four hours using a terrestrial communication link is not persuasive. The Master Control Station of Taylor et al transmits almanac data, which corresponds to satellite tracking data, to the Remote Control station. Thus, the Remote Control Station receives satellite tracking data that is valid for at least four hours since almanac data is known to be valid for at least four hours. Additionally, Taylor et al teach

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the use of a transmitter at the RCS to transmit the signal as well as suggest that to provide greater coverage, a tower or a reference satellite may be provided to relay the transmitter signal. Thus, Taylor et al is not strictly related to a satellite communication link but encompasses terrestrial communication links as well. Thus, the claim language of “said satellite tracking data being valid for at least four hours” is met by the prior art. King et al do not teach away from the teachings of Taylor et al with respect to receiving satellite control data from a satellite control station. In order to “teach away from,” the proposed modification would be required to defeat the purpose of one or both of the intended operations of the combined references or specifically state not to do the proposed modification. This is not the case with respect to the combination of King et al and Taylor et al. While a preferred embodiment of King et al may be directed to directly receiving the data from the satellites, alternative embodiments suggest receiving the data from a remote location. The reception of the data from the satellite control station as proposed by Taylor et al would not defeat the purpose or operation of King et al whose intended purpose is to receive data regarding the satellite trajectories. For the reasons set forth above, the combination of references are deemed to suggest the claimed subject matter and the applicants’ arguments are not convincing.

4. Claims 26-28 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al in view of Taylor et al and Moore et al.

The rejection is substantially set forth above. Moore et al teach the conventionality of accessing satellite data via a web page, i.e. the Internet, which is not shown by King et al in view of Taylor et al but which is claimed. It is well known that almanac data is valid for several weeks while status information is valid for as long as predetermined statuses are present. Thus,

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it would have been obvious to one having ordinary skill in the art at the time the invention was made to transmit the satellite tracking data to the mobile user via the Internet in view of the fact that the Internet is a common source of widely distributed information sources as taught by Moore et al.

Applicants base the patentability of these claims on the patentability of the independent claims for reasons previously presented above. For the same reasons set forth above, the arguments are not persuasive.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

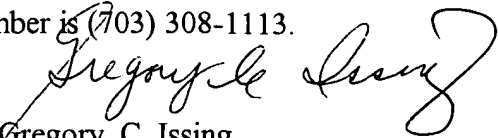
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (703)-306-4156. The examiner can normally be reached on Mon-Thurs 6:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703)-306-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


Gregory C. Issing
Primary Examiner
Art Unit 3662

gci